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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,538

05/25/2006

Klaus Endres

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EXAMINER

VO, HAI

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

07/15/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Office Action Summary	Application No. 10/580,538	Applicant(s) ENDRES ET AL.	
	Examiner Hai Vo	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-76 is/are pending in the application.
- 4a) Of the above claim(s) 44-52, 56, 60, 62 and 68-76 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-43, 53-55, 57-59, 61 and 63-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/04/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election of Group I, claims 30-67, a polycondensate or precursor as species (i), a nanoparticle with surface modification as species (ii) and a hollow particle as species (iii) in the reply filed on 04/23/2008 is acknowledged. The examiner notes that since the polycondensate or precursor species is elected, the election of the nanoparticle species (ii) is not necessary. Accordingly, claims 30-43, 53-55, 57-59, 61, and 63-67 will be examined in the Office Action. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30-43, 53-55, 57-59, 61, 63-67 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kudas et al (US 2003/0175411). Kudas teaches a precursor composition made from an molecular precursor, metal oxide nanoparticles and hollow microspheres (paragraphs 29, 34, 70, 187, 345, and 346). The binder is the precursor (paragraph 316). The precursor includes an electrically conductive polymer, thermoplastic polymer and at least one refractory component (paragraphs 80, 127 and 344). The precursor composition has a porosity of not greater than 25% (paragraph 400). The composition is applied to a substrate and cured (paragraph 295). Kudas does not specifically disclose the relative pore size of the additional pores and the pores of the porous matrix. However, Kudas uses the same materials for the nanoparticles and microspheres as Applicants, the nanoparticles and microspheres having the particle sizes within the ranges disclosed in the present specification. Kudas teaches the microspheres having an average particle size of 2 microns (paragraph 55), the nanoparticles having an average particle size of 25 to 75 nm (paragraph 29). The examiner notes that the pore size of the porous matrix is dictated by the particle size of the nanoparticles. Similarly, the pore size of additional pores generated by microspheres is determined by the particle size of the

microspheres. Therefore, it is the examiner's position that the relative pore size set out in the claim would be inherently present as like material has like property.

Kodas does not specifically disclose the precursor composition is in a form of a molded body. However, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of Kodas is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Kodas. Accordingly, Kodas anticipates or strongly suggests the claimed subject matter.

5. Claims 30, 31, 35-38, 42, 43, 53-55, 57-59, 61, and 63-66 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Farnworth et al (US 7,153,754). Farnworth teaches a porous insulative material made from a silica aerogel and hollow microspheres (column 5, lines 30-35, column 8, lines 48-50). The insulative material has a porosity ranging from 70 to 99% (column 9, lines 54-55). The binder is the precursor (column 9, lines 50-55). The composition is applied to a substrate and cured (figure 1C). The insulative material is a combination of a polymer and a silica aerogel (column 5, lines 30-35). The sol-gel solution is silicone oxide or a metalloid alkoxide (column 9, lines 20-50). Farnworth teaches the nanoparticles having an average particle size of 2 to 10 nm (column 9, lines 54-55). The examiner notes that the pore size of the porous matrix is dictated by the particle size of the nanoparticles. Therefore, it is the examiner's position that the pore size of the porous matrix set out in the claim would be inherently present as like material has like property. Farnworth does not specifically disclose the precursor composition is in a form of a molded body. However, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of Farnworth is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The

patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Farnworth. Accordingly, Farnworth anticipates or strongly suggests the claimed subject matter.

6. Claims 32-34, 39-41 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnworth et al (US 7,153,754) as applied to claim 30 above, and further in view of Kodas et al (US 2003/0175411). Farnworth does not specifically disclose the particle size of the hollow microspheres. Kodas teaches a precursor composition made from an molecular precursor, metal oxide nanoparticles and and hollow microspheres (paragraphs 29, 34, 70, 187, 345, and 346). The binder is the precursor (paragraph 316). Kodas teaches the microspheres having an average particle size of 2 microns (paragraph 55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the microspheres with an average

particle size as taught by Kodas because such is a typical particle size of the microspheres and Kodas provides necessary details to practice the invention of Farnworth. It appears that the combined teachings of Farnworth and Kodas suggest the use of nanoparticles and microspheres which have the particle sizes within the ranges disclosed in the present specification. The nanoparticles having an average particle size of 2 to 10 nm (Farnworth, column 9, lines 54-55). Kodas teaches the microspheres having an average particle size of 2 microns (paragraph 55). The examiner notes that the pore size of the porous matrix is dictated by the particle size of the nanoparticles. Similarly, the pore size of additional pores generated by microspheres is determined by the particle size of the microspheres. Therefore, it is the examiner's position that the relative pore size set out in the claim would be inherently present as like material has like property.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hai Vo/
Primary Examiner, Art Unit 1794